## PEER REVIEW HISTORY



## ARTICLE DETAILS

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| **TITLE (PROVISIONAL)** | A Mixed Methods Evaluation of Unconscious Racial Bias Training for NHS Senior Practitioners to Improve the Experiences of Racially Minoritised Students |
| **AUTHORS** | Pennington, Charlotte; Bliss, Eleanore; Airey, Alisha; Bancroft, Mandy; Pryce-Miller, Maxine |

## VERSION 1 – REVIEW

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| **REVIEWER** | Ahadinezhad, Bahman<br>Qazvin University of Medical Sciences |
| **REVIEW RETURNED** | 24-Oct-2022 |

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| **GENERAL COMMENTS** | The study design should be explained more clearly<br>The method that has neutralized the effect of covariates should be fully explained<br>The duration of the follow-up should be stated<br>The control group should be fully introduced<br>The limitations of the study should be stated |

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| **REVIEWER** | Williams, Monnica T.<br>University of Ottawa |
| **REVIEW RETURNED** | 30-Oct-2022 |

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| **GENERAL COMMENTS** | This study evaluates the effectiveness of a 4-hour diversity training focused on unconscious racial bias for senior practitioners with the aim of teaching the practitioners how to recognize how racial inequalities negatively affect BAME students in higher education and healthcare practice. To assess the effectiveness of the intervention, the authors administer pre- and post-measures of workshop satisfaction and collect additional feedback at 1 month follow up.<br><br>This is an important intervention, as BAME students face barriers to discrimination at all points throughout their educational journey, and this problem was described well in the Introduction. The main shortcoming with this project is a common one, where the variables measured in these types of studies tend to be focused on satisfaction, putative planned behaviors, and post intervention knowledge. However, these variables may or may not be correlated to changes in behavior, which is what I would argue is the actual point of the intervention. This is point is a critical one, as most White people (and many BAME) have poor insight into their own level miseducation around race. Further, education alone is generally insufficient to create a change in behaviors when actors have been socially conditioned their whole lives to be passive or ignorant in the face of racism. Thus, rating the quality of the |

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| | workshop based on satisfaction or increased knowledge is rarely adequate. This is precisely how so many ineffective trainings are foisted onto the public, even though they may call themselves "evidence based."<br><br>More critical targets would be actual changes in attitudes, behaviors, and observed changes reported by others. These are challenging things to measure, and the authors might better learn how others have accomplished this (e.g., Kanter et al., 2020, https://doi.org/10.1186/s12909-020-02004-9). Notably, in the current study, the participants themselves report modest levels of actual behavioral change at follow-up.<br><br>Further, the measures described in the methods do not seem to actually measure knowledge, rather only that the participants think that they have more knowledge. This is an important distinction and should be clarified.<br><br>In terms of the methodology, there should have been better use of the literature in supporting the chosen components of the workshop. See the Racial Harmony Workshop, Williams et al., 2020 (https://doi.org/10.1016/j.jcbs.2020.04.008).<br><br>Even so, based on the feedback of the participants, it appears that the workshop was useful and had necessary and appropriate content. Despite the discomfort caused by the new learning, the participants had positive feedback, which is also promising.<br><br>In the Discussion, outcomes are overstated (p. 23: "success of this training") given that arguably the most important outcome variables were not measured. Notably, "thinking about how to have conversations about race with staff in practice" (p. 23) is quite different than actually having such conversations, which is different from having effective conversations. The bar is too low.<br><br>In summary, I think this workshop and the study described herein is a critical early step in the development of a potentially empirically-supported approach, but the authors need to do follow-up studies with much stronger evidence to show that it is effective. It is premature to suggest that this workshop be used widely, otherwise we risk releasing yet another ineffective diversity training into the world.<br><br>There is a dearth of literature on this topic in the UK, but The Cognitive Behaviour Therapist has been active on this. Two additional recent sources I recommend to strengthen this paper are Lawton, McRae, & Gordon (2021; doi:10.1017/S1754470X21000271) and Williams (2022; https://doi.org/10.1017/S1754470X22000162) |

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| **REVIEWER** | Uzendu, Anezi<br>Saint Luke's Mid America Heart Institute |
| **REVIEW RETURNED** | 06-Nov-2022 |

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| **GENERAL COMMENTS** | The authors tackle an important topic, The BAME degree awarding gap in the NHS. They layout harrowing evidence for these findings and the role unconscious racial bias training may have in improving this. They go on to conduct this training for a select group of senior NHS practitioners and assess its effects. Would work to make the introduction a bit shorter/ more concise. |

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| | Pg 5 Line 29- explain abbreviation “HE”<br>Pg 6 Line 52- “in in”<br>Would also mention that one limitation is the homogenous nature of the participants and that findings may not be generalizable.<br>“This resulted in a final sample size of 49 participants (MAGE = 45.31, SD = 10.20) of whom 41 identified as female and White British. Thirty-three were Nurses, nine Midwives, three Higher Education Lecturers, and four from other independent (and therefore anonymised) healthcare roles” |

## VERSION 1 – AUTHOR RESPONSE

**Reviewer: 1**

Bahman Ahadinezhad, Qazvin University of Medical Sciences

**Comment:** The study design should be explained more clearly.

**Response:** We have revised the Abstract and Methods section of the manuscript to clearly outline the design, as follows:

Abstract, Page 2, Lines 32-41: “**Design:** A mixed methods study with a pretest-posttest design was conducted in the higher education and healthcare practice environment. **Methods:** Forty-nine Senior Healthcare Practitioners completed a 4-hour URBT workshop with activities focusing on activating stereotypes, exploring differences between unconscious and implicit bias, discussing the development of bias, and reflecting on student experiences of prejudice, harassment, and discrimination. They completed pre- and post-quantitative measures that assessed the effectiveness of URBT and changes in racial competency, awareness and perceptions of unconscious racial bias. Qualitative measures explored the usefulness and perceived applications of URBT, and a one-month follow-up gauged how it had been applied within practice.”

Methods, Page 9, Lines 203-215: “**Design**: A quasi-experimental pretest-posttest design was combined with an explanatory mixed methods approach (48). The quantitative component comprised immediate pre- and post-questionnaire measures and a one-month follow-up questionnaire to evaluate the effectiveness of URBT. The qualitative component included open-ended questions regarding the usefulness and applications of the training. The URBT workshop and its evaluation were developed in line with recent large-scale evaluations (42,46,47): specifically, we ensured that the training was: 1) explicitly aimed at increasing understanding and awareness of unconscious racial bias, 2) tailored to the healthcare environment; 3) discussed the impact on racially minoritised students and staff; 4) acknowledged potential feelings of discomfort and their importance; 5) explored strategies to mitigate bias with a focus on behaviour change; and 6) included a follow-up to assess the application of training in practice. Outcome measures were selected based on their previously demonstrated rigour (42).”

**Comment:** The method that has neutralized the effect of covariates should be fully explained.

**Response:** Please see our response above. We now include a “Design” subsection within the Abstract and Method that clearly outlines the pretest-posttest quasi-experimental design.

**Comment:** The duration of the follow-up should be stated.

**Response:** We have stated throughout the manuscript that the follow-up questionnaire was sent to participants approximately 1-month after the date of their workshop attendance. We now clarify on Page 13, Lines 301-303 that they were asked to return this questionnaire within a period of three-weeks.

**Comment:** The control group should be fully introduced.

**Response:** A quasi-experimental pretest-posttest design was combined with an explanatory mixed methods model. There was no control group and instead baseline (pretest) measures were used (see Bell, 2010). This has been clarified, as per above, on Page 9.

Reference: Bell, B. (2010). Pretest–posttest design. In N. J. Salkind (Ed.), Encyclopedia of research design (pp. 1087-1091). SAGE Publications, Inc., https://dx.doi.org/10.4135/9781412961288.n331

**Comment:** The limitations of the study should be stated.

**Response:** We now include an explicit "Limitations & Future Directions" subsection within the Discussion We have also outlined these limitations in short bullet points, as per the journal guidelines, at the start of the article. These revisions are as follows:

Bullet points on Page 3, Lines 60-64: "Our study assessed self-report evaluations and perceptions but did not assess longer-term objective measures of behaviour change (e.g., changes in student attainment, staff retention, progression, and disciplinary hearings for racially minoritised individuals). Research suggests that the effectiveness of training may decay over time so a longer or additional follow-up period would be fruitful (however, this can introduce an equitable challenge of greater response attrition)".

Page 23, Lines 461-476: "**Limitations & Future Directions:** The main limitation of the current study is a common one in the literature on unconscious bias training: our outcome measures focused on the training's usefulness, post-intervention knowledge, and putative planned behaviours rather than actual behaviour change. Research has suggested that training effects can decay over time (57) and longitudinal studies are therefore required to assess the sustained effectiveness of this training with more objective indicators (e.g., changes in student attainment, staff retention, progression, and disciplinary hearings). A recent study provides a gold-standard example of this, assessing whether a training workshop reduced racial microaggressions through simulated interracial patient encounters (58)."

**Reviewer: 2**

Dr. Monnica T. Williams, University of Ottawa

**Comment:** This study evaluates the effectiveness of a 4-hour diversity training focused on unconscious racial bias for senior practitioners with the aim of teaching the practitioners how to recognize how racial inequalities negatively affect BAME students in higher education and healthcare practice. To assess the effectiveness of the intervention, the authors administer pre- and post-measures of workshop satisfaction and collect additional feedback at 1 month follow up. This is an important intervention, as BAME students face barriers to discrimination at all points throughout their educational journey, and this problem was described well in the Introduction.

**Response:** Thank you for the positive appraisal of our manuscript and for your invaluable comments which have improved our manuscript considerably. We have actioned all your recommendations, which we outline point-by-point below.

**Comment:** The main shortcoming with this project is a common one, where the variables measured in these types of studies tend to be focused on satisfaction, putative planned behaviors, and post intervention knowledge. However, these variables may or may not be correlated to changes in behavior, which is what I would argue is the actual point of the intervention. This is point is a critical one, as most White people (and many BAME) have poor insight into their own level miseducation around race. Further, education alone is generally insufficient to create a change in behaviors when actors have been socially conditioned their whole lives to be passive or ignorant in the face of racism. Thus, rating the quality of the workshop based on satisfaction or increased knowledge is rarely adequate. This is precisely how so many ineffective trainings are foisted onto the public, even though they may call

themselves “evidence based. More critical targets would be actual changes in attitudes, behaviors, and observed changes reported by others. These are challenging things to measure, and the authors might better learn how others have accomplished this (e.g., Kanter et al., 2020, https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fdoi.org%2F10.1186%2Fs12909-020-02004-9&data=05%7C01%7Cad7632%40coventry.ac.uk%7C74e3af5fbd65449a971b08dac295940d%7C4b18ab9a37654abeac7c0e0d398afd4f%7C0%7C0%7C638036244946591768%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=a3tkc1j5zkx%2B%2BZjRgadiZahNYXO%2FYR9D7UDX%2BkbBmZY%3D&reserved=0). Notably, in the current study, the participants themselves report modest levels of actual behavioral change at follow-up.

**Response:** Thank you for this crucially important point. We have now revised the Discussion section to have an explicit “Limitations & Future Directions” sub-section which highlights the requirement for more objective measurements of behaviour change. Promisingly, we also outline how our work has led to the development and adoption of an anti-racism framework for one NHS Trust. This framework provides staff and management with a resource to document and assess their actions towards becoming an anti-racist organisation.

Page 23, Lines 461-491: **Limitations & Future Directions: “**The main limitation of the current study is a common one in the literature on unconscious bias training: our outcome measures focused on the training’s usefulness, post-intervention knowledge, and putative planned behaviours rather than actual behaviour change. Research has suggested that training effects can decay over time (57) and longitudinal studies are therefore required to assess the sustained effectiveness of this training with more objective indicators (e.g., changes in student attainment, staff retention, progression, and disciplinary hearings). A recent study provides a gold-standard example of this, assessing whether a training workshop reduced racial microaggressions through simulated interracial patient encounters (58). As a positive early indicator of change, the current research has nevertheless informed the development of an anti-racism framework within one NHS Trust. This framework was coproduced with healthcare staff and focuses on six key principles of leadership, policy, transparency, wellbeing and belonging, employment, and education. It aims to provide a resource for management and individual staff members to facilitate individual accountability and monitor actions towards being an anti-racist colleague and organisation. A longer-term evaluation of this framework is planned.

It is also important to note that, although the majority of qualitative responses were positive, some participant’s quotes revealed inherent racial biases within them, too. For example, when asked “since learning about unconscious bias, in what way do you think that this might influence your practice?”, one participant responded that one barrier was “when people of colour play the race card when they are being managed about their performance. People are not confident in how to challenge appropriately”. This language reveals unconscious racial biases that may perpetuate racial inequalities by passing the blame onto racially minoritised students and staff themselves. When asked this same question, another participant responded that “I also think there is a risk that it may have a negative effect on my under[st]anding of different cultures as I am less likely to ask staff questions about differences in cultures in case this is perceived to be micro aggressions”. Although there were only a few instances of such responses, we include them here to highlight finer nuances around the effectiveness of URBT and the need for continued education to eradicate bias. Additional follow-up sessions after the training would be fruitful to explore participant’s responses further and dismantle any misunderstandings.”

**Comment:** Further, the measures described in the methods do not seem to actually measure knowledge, rather only that the participants think that they have more knowledge. This is an important distinction and should be clarified.

**Response:** Indeed, this is general limitation of self-reports and relates to your comment regarding objective measures of behaviour change. To acknowledge this limitation, we have revised the terminology used in the Method and Discussion section by including the term "perceived" prior to the measures (e.g., Perceived awareness and attitudes regarding unconscious bias, Page 12, Lines 279). As explained above, we now also include a discussion of the Limitations on Page 23, Lines 461-491, which articulates these issues in full.

**Comment:** In terms of the methodology, there should have been better use of the literature in supporting the chosen components of the workshop. See the Racial Harmony Workshop, Williams et al., 2020 ( https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fdoi.org%2F10.1016%2Fj.jcbs.2020.04.008&data=05%7C01%7Cad7632%40coventry.ac.uk%7C74e3af5fbd65449a971b08dac295940d%7C4b18ab9a37654abeac7c0e0d398afd4f%7C0%7C0%7C638036244946591768%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=J6MUpiepud5ofYIO%2Fhqzx2dBOrmKNeT9pAjrxf9c7Go%3D&reserved=0). Even so, based on the feedback of the participants, it appears that the workshop was useful and had necessary and appropriate content. Despite the discomfort caused by the new learning, the participants had positive feedback, which is also promising.

**Response:** We were not aware of Williams' Racial Harmony Workshop and this is likely because it was published at the same time we developed our evaluation materials. We did, however, conduct a scoping review of the literature to inform the development of the training and assess the most rigorous evaluation measures, which drew heavily on large-scale evaluations by Atewologun et al. (2018), The Behaviour Insights Team (2020) and Carter et al. (2020). We have revised the "Design" section on Page 9, Lines 203-216 to outline this in detail:

"The URBT workshop and its evaluation were developed in line with recent large-scale evaluations (42,46,47): specifically, we ensured that the training was: 1) explicitly aimed at increasing understanding and awareness of unconscious racial bias, 2) tailored to the healthcare environment; 3) discussed the impact on racially minoritised students and staff; 4) acknowledged potential feelings of discomfort and their importance; 5) explored strategies to mitigate bias with a focus on behaviour change; and 6) included a follow-up to assess the application of training in practice. Outcome measures were selected based on their previously demonstrated rigour (42)."

In addition, we have revised our article to include the articles recommended, as follows:

Kanter, J. W., Rosen, D. C., Manbeck, K. E., Branstetter, H. M. L., Kuczynski, A. M., Corey, M. D., Maitland, D. W. M., & Williams, M. T. (2020). Addressing microaggressions in racially charged patient-provider interactions: A pilot randomized trial. *BMC Medical Education, 20,* 88. https://doi.org/10.1186/s12909-020-02004-9

Lawton, L., McRae, M., & Gordon, L. (2021). Frontline yet at the back of the queue: Improving access and adaptations to CBT for Black African and Caribbean communities. *The Cognitive Behaviour Therapist, 14,* 1-19. https://doi.org/10.1017/S1754470X21000271

Williams, M. T. (2020). Microaggressions: Clarification, evidence, and impact. *Perspectives on Psychological Science, 15,* 3-26. https://doi.org/10.1177/1745691619827/499

Williams, M. T., Faber, S. C., & Duniya, C. (2022). Being an anti-racist clinician. *The Cognitive Behaviour Therapist, 15,* 1-22. https://doi.org/10.1017/S1754470X22000162

**Comment:** In the Discussion, outcomes are overstated (p. 23: "success of this training") given that arguably the most important outcome variables were not measured. Notably, "thinking about how to have conversations about race with staff in practice" (p. 23) is quite different than actually having such conversations, which is different from having effective conversations. The bar is too low.

**Response:** We have revised the Discussion to ensure we do not overstate the outcomes. For example, this sentence now reads: “These preliminary positive findings suggest that UBRT may be more effective when developed in line with these recommendations, and these should be considered in the development and implementation of future training interventions”.

We have also adopted a more balanced/critical writing style when discussing the findings throughout the Discussion, e.g. on Page 22, Line 438-442: “Nevertheless, participants were also neutral with regards to noticing a positive change in the way that students/staff had responded to their mentoring. This may reflect the short follow-up period in which participants were asked this question, highlighting the need for continuous, long-term evaluations to ensure that URBT has its intended impact of negating racial inequalities”.

**Comment:** In summary, I think this workshop and the study described herein is a critical early step in the development of a potentially empirically-supported approach, but the authors need to do follow-up studies with much stronger evidence to show that it is effective. It is premature to suggest that this workshop be used widely, otherwise we risk releasing yet another ineffective diversity training into the world. There is a dearth of literature on this topic in the UK, but The Cognitive Behaviour Therapist has been active on this. Two additional recent sources I recommend to strengthen this paper are Lawton, McRae, & Gordon (2021; doi:10.1017/S1754470X21000271) and Williams (2022; https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fdoi.org%2F10.1017%2FS1754470X22000162&data=05%7C01%7Cad7632%40coventry.ac.uk%7C74e3af5fbd65449a971b08dac295940d%7C4b18ab9a37654abeac7c0e0d398afd4f%7C0%7C0%7C638036244946747921%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=ggGioBxZ%2BCN7eIAILEljpuLn4yOFU4E%2FsX%2FhsWHyHqE%3D&reserved=0).

**Comment:** Based on your helpful comments above, we have revised the manuscript considerably to discuss the findings in a more balanced/critical manner. We now include an explicit ‘Limitations & Future Directions’ subsection within the Discussion (see above responses). Finally, we have now included the recommended references by both Lawton et al. (2021) and Williams et al. (2022), as follows:

Introduction, Page 4, Lines 74-75. “s healthcare patients, they have poorer access to services, receive inadequate treatment, and their mortality rates are higher (4–7).”

Introduction, Page 5, Lines 99-102: “They also report experiences of microaggressions – defined as subtle or offensive comments, action, or inaction directed at a minority group (23,24) – that adversely impacts their sense of belonging, confidence, mental health, and progression at university (25–28).”

Discussion, Page 23, Lines 464-469: “Research has suggested that training effects can decay over time (57) and longitudinal studies are therefore required to assess the sustained effectiveness of this training with more objective indicators (e.g., changes in student attainment, staff retention, progression, and disciplinary hearings). A recent study provides a gold-standard example of this, assessing whether a training workshop reduced racial microaggressions through simulated interracial patient encounters (58).”

Discussion, Page 24, Lines 510-513: “Furthermore, open and honest conversations about racism are essential outside of URBT to ensure indefinite, positive change (27). Individuals, institutions, and organisations must take an anti-racist approach, demonstrating that they are actively combatting systemic inequalities and structural injustice (59).”

**Reviewer: 3**

Dr. Anezi Uzendu, Saint Luke's Mid America Heart Institute

**Comment:** The authors tackle an important topic, The BAME degree awarding gap in the NHS. They layout harrowing evidence for these findings and the role unconscious racial bias training may have in improving this. They go on to conduct this training for a select group of senior NHS practitioners and assess its effects.

**Response:** Thank you for your positive evaluation of our manuscript and your detailed comments. We have implemented your recommendations, as follows below.

**Comment:** Would work to make the introduction a bit shorter/ more concise.

**Response:** We have shortened the Introduction to enhance readability. Please see the tracked changes in the revised document.

**Comment:** Pg 5 Line 29- explain abbreviation “HE”.

**Response:** Thank you for spotting this; we have corrected this to “higher education” and, to avoid any confusion, have not abbreviated this term throughout.

**Comment:** Pg 6 Line 52- “in in”

**Response:** We have now corrected this typo.

**Comment:** Would also mention that one limitation is the homogenous nature of the participants and that findings may not be generalizable. “This resulted in a final sample size of 49 participants (MAGE = 45.31, SD = 10.20) of whom 41 identified as female and White British. Thirty-three were Nurses, nine Midwives, three Higher Education Lecturers, and four from other independent (and therefore anonymised) healthcare roles”

**Response:** We perceive this as an advantage rather than a limitation of our study design based on recommendations which suggest that unconscious racial bias training should be tailored to the targeted audience. In this case, this was NHS Senior Healthcare Practitioners who are in leadership and management positions that allow them to implement significant changes to the healthcare and education environment. We outline this as follows:

Page 3, Lines 50-56: “In line with recommendations, unconscious racial bias training was delivered to NHS Senior Practitioners in the practice and higher education environment and focused explicitly on increasing awareness of and concern about racial bias. NHS Senior Practitioners are in leadership and management positions that allow them to implement significant changes, so this targeted population represents a strength of our research.”

Page 9, Lines 192-195: Underpinned by these recommendations, we developed and evaluated an unconscious racial bias training (URBT) workshop delivered to NHS Senior Practitioners in the practice and healthcare environment with the training focused explicitly on increasing awareness of and concern about racial bias.

Page 9, Lines 208-215: “The URBT workshop and its evaluation were developed in line with recent large-scale evaluations (42,46,47): specifically, we ensured that the training was: 1) explicitly aimed at increasing understanding and awareness of unconscious racial bias, 2) tailored to the healthcare environment; 3) discussed the impact on racially minoritised students and staff; 4) acknowledged potential feelings of discomfort and their importance; 5) explored strategies to mitigate bias with a focus on behaviour change; and 6) included a follow-up to assess the application of training in practice. Outcome measures were selected based on their previously demonstrated rigour (42).”

Nevertheless, in line with the suggestions by Reviewer 2, we now explicitly discuss the Limitations of this research on Page 23, Lines 461-491 (see above).

Thank you again for your time in reviewing this manuscript. The peer review process has allowed us to make considerable improvements.